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CLARIFICATIONS TO PROPOSAL [ ] STAT

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The following section is added as a part of [ ] Proposal [ ] STAT to clarify the configuration of the proposed system:

1. The government agency has the option to select one of the following system parameters:

a. The field of view of the system as apparent to the eye shall be 35^{o} minimum. The resolution is 5.5 to 6 lines/millimeter multiplied by the magnification at the low magnification, up to 600 lines/millimeter at the high magnification of 125x. The above parameters are achieved by having the eyepiece magnification at 8x.

b. The field of view of the system as apparent to the eye shall be 26^{o} minimum. The resolution is 7-8 lines/millimeter multiplied by the magnification up to 600 lines/millimeter at the high magnification of 125x. The above parameters are achieved by having the eyepiece magnification at 6x.

The choice of any of the above options can be made without additional cost providing the choice is made known within 60 days after award.

2. A turret will be provided to enable selection of one of 4 lenses. A low magnification lens is added to provide magnification variable between 1.5x and 6x. The total system magnification is continuously variable between 1.5x and 125x.

3. A programming system is provided that allows the film marking system to be initiated at any magnification setting between 1.5x and 125x. Thus, if the system magnification is set at the low-end objective, the following program is effected:

a. As the film marking button is pushed, the lens objective turret is driven to the high magnification lens setting.

b. The laser flash is automatically actuated.

c. The turret is returned to the original magnification setting.

The time required to achieve the automatic operation listed above is 5 seconds. However, when the magnification is originally at high magnification, steps 1 and 3 are not required, resulting in total time for marking 1-2 seconds. The above item is included in the original cost.

4. The accuracy achieved for marking is $\pm$ 1 micron, independent of the original position of the objective lens turret. This is achieved by allowing the rotation of the turret to be in one direction only. However, there is an obvious limit to accuracy at the low magnifications, since the operator may not be able to position the target to the accuracy of $\pm$ 1 micron. In this case, the limitation is caused by the operator and not the equipment.

STAT 5. [redacted] perform accuracy tests of mark positioning utilizing the following:

1. Star images on film, not more than 3 microns in diameter.

2. Resolution targets or gratings, having a size small enough to enable accuracy of measurement to better than a micron.

6. The marking reticle will be provided as either an annular ring (example: inner diameter 20 micron, outer diameter 40 microns), or a circle. The exact configuration will be determined after approval by the cognizant government agency.

STAT 7. [redacted] study the optimum utilization of the laser for film identification as to optimum size, energy, duration, of pulse, wavelength of light, and other pertinent parameters to allow its utilization for the requirements specified.

8. Casters are provided as a part of the system. The cost of the casters is included in the original cost estimate.

9. 20' Film Loop:

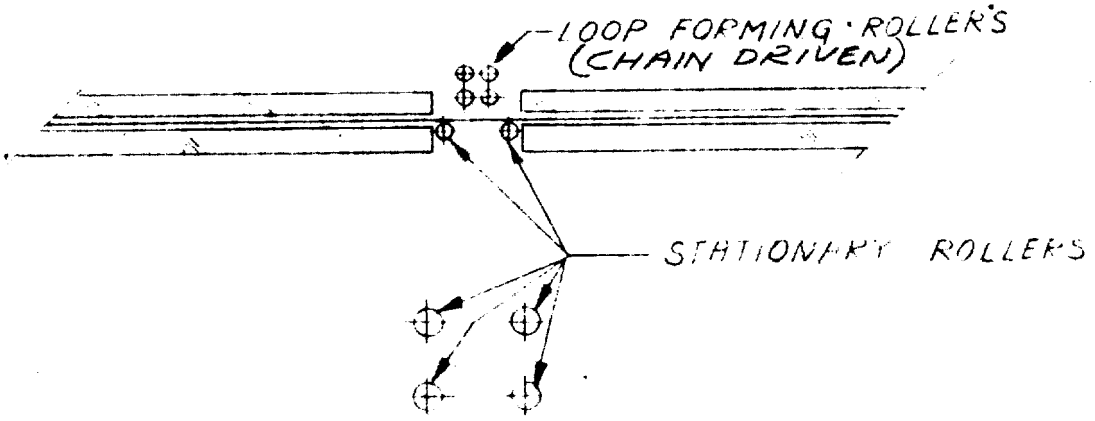
Alternate A

This approach to achieve an increase of film loop to 20' minimum by making the chain drive for the film loop longer by increasing the length of the cabinet for extending approximately 12" beyond the cabinet below the lower film spools. The cabinet configuration is shown in Figure 1 (B) attached herewith. This change necessitates the modification of the film loop drive, the cabinet, and covers.

Alternate B

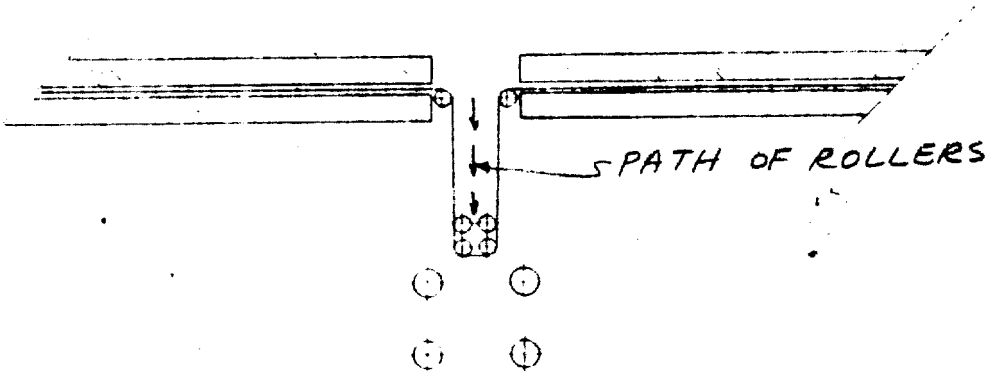
This approach to achieve an increase of the film loop to 24' minimum by incorporating a double set of rollers within the cabinet as shown in Figure 5 (B) attached. This arrangement necessitates increasing the number of rollers which are supported by the chain, in addition to modifying the support of the chains at film format level, and associated redesign necessitated by confined space requirement. The size and configuration of the viewer is not changed by this modification.

a



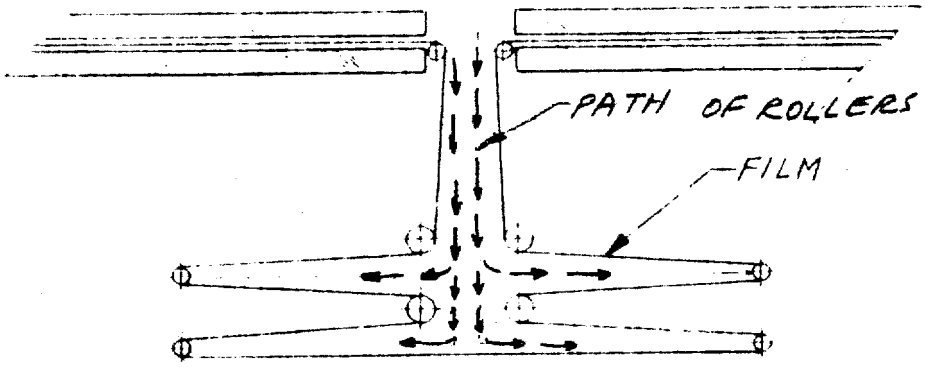
FILM FLAT

b



SMALL LOOP

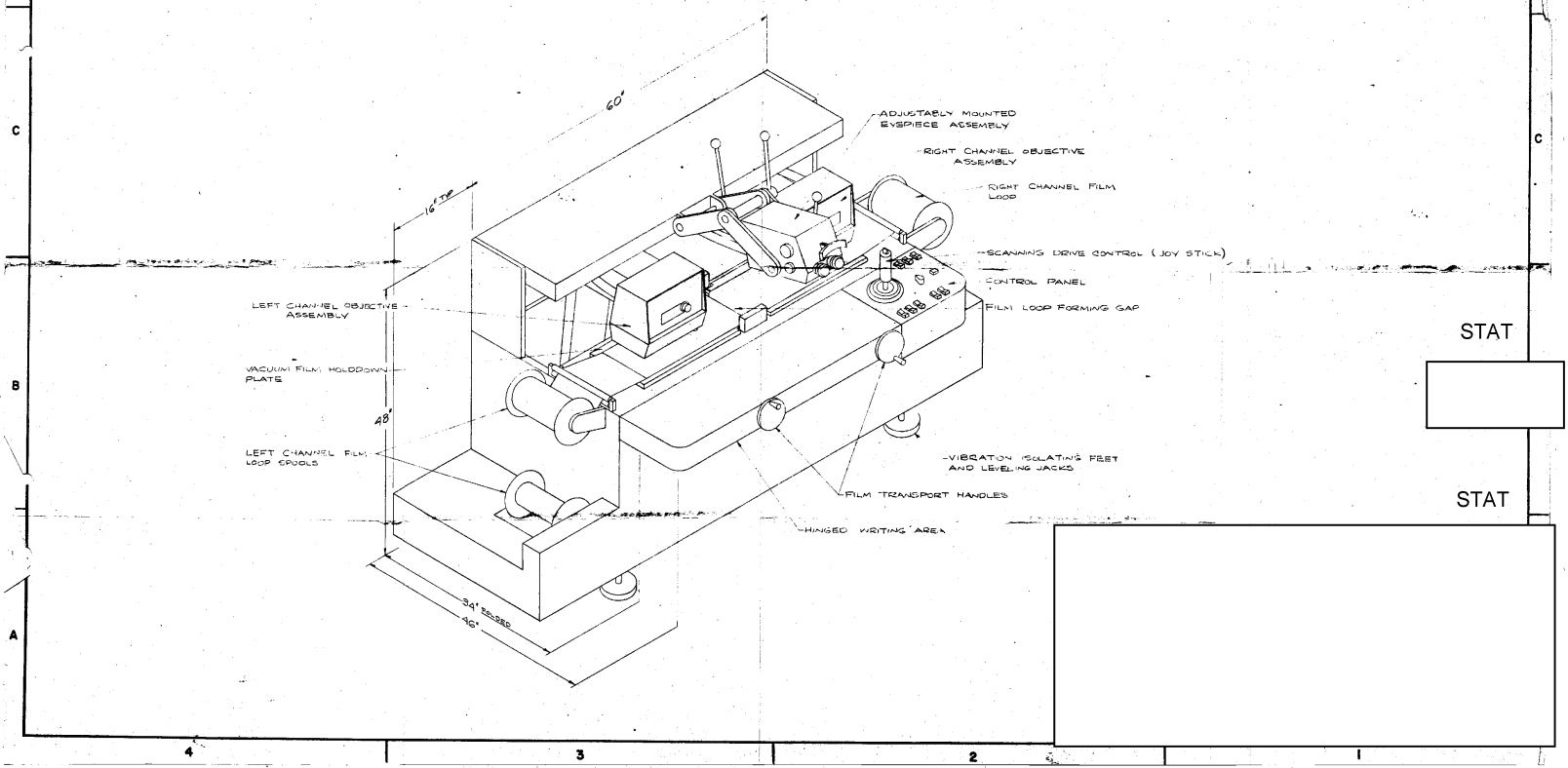
c



LARGE LOOP

FIGURE 5B

FILM LOOP FORMING MECHANISM



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ADDENDUM TO PROPOSAL [redacted]

DATED 26 JUNE 1963

OPTIONAL FEATURE #7

Movable Control Console.

The control console is provided within a separate box with a 6-foot interconnecting electrical cable to the main body of the viewer. The size of this package is 9" deep by 16" wide by 6" high approximately. It can be located at any position relative to the viewer (right, or left, or a few feet away from the viewer). Spring loaded or snap-on cable holders are provided within the viewer to allow the take-up of extra cable. Supports are provided at the right and left sides for positioning of the console to the right or left side of the operator. The console contains a connector at the back for interconnection to the viewer so that it is a separate portable package.

The exact size and configuration of the control console shall be determined after a human engineering analysis to assure minimum size within the functional requirement, and providing identification of all components by feel. The writing shelf will be modified for positioning the control at the right or left.

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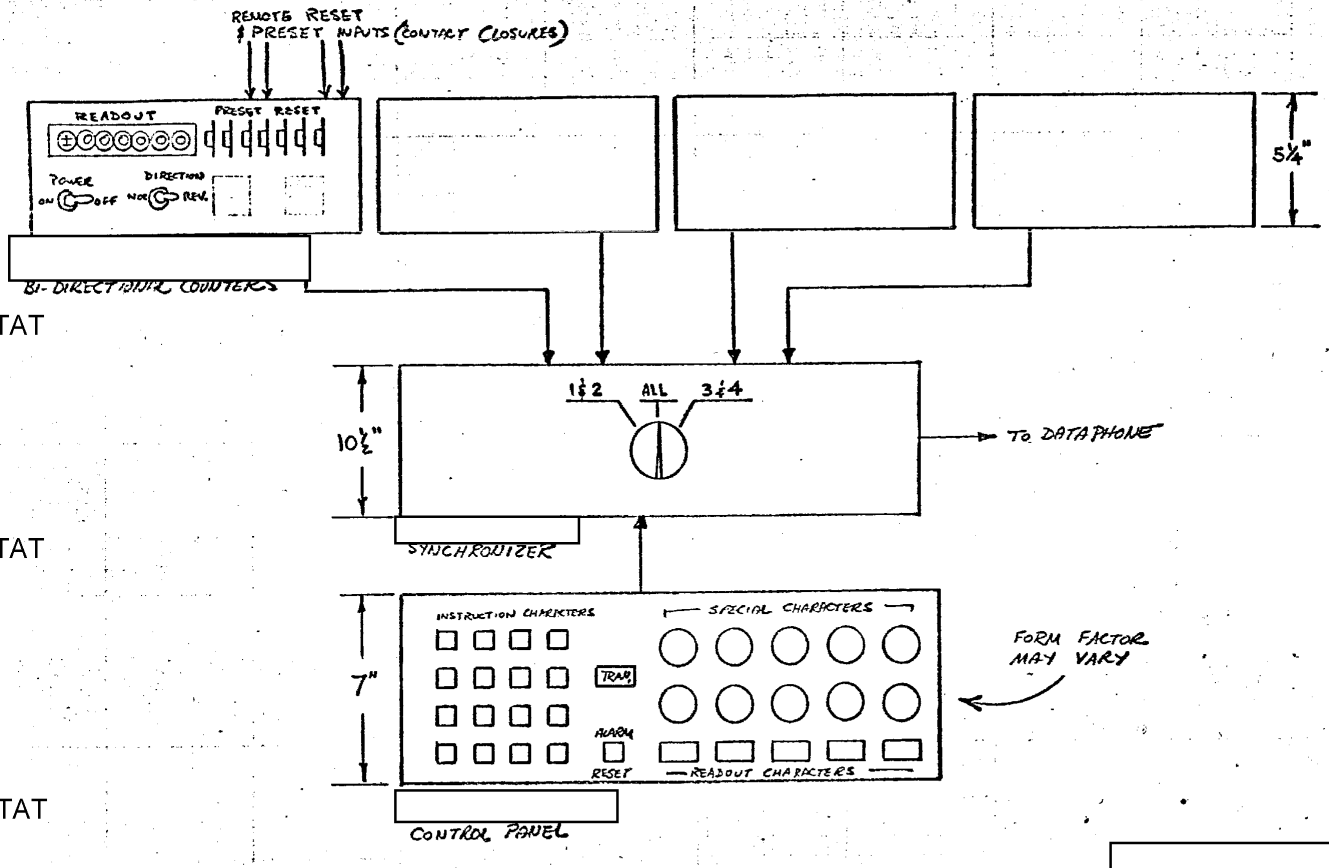

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